GAYMAR®

AIR EXPRESS™ LAL

P1500 LOW AIR LOSS THERAPY SYSTEM

- **REF C1500 Control Unit**
- **REF M1500 Mattress**

Operator's Manual

P/N 11882-000 6/03

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INTRODUCTION

This Owner's Manual was designed to assist both caregivers and patients when using the P1500 Low Air Loss Therapy System. It can be used as a continual information resource and we suggest that you have it available to answer most of the questions that you may have regarding the set up, cleaning and routine maintenance of the system.

Before you begin…

⚠ Important

Before using the P1500 System, please read and understand this manual and all safety precautions prior to each application.

Only qualified medical service personnel should attempt to repair this device. A *Service Manual* is available for use by qualified personnel. For assistance contact your local dealer. If additional assistance is needed, contact Gaymar's technical service department.

International Customers:

Direct (716) 662-8636
Fax: (716) 662-0730

Domestic Customers:

Toll Free (800) 828-7341
Fax: (716) 662-8795

1.0 Warranty

The Control Unit is warranted free of defects in material and workmanship for a period of two (2) years.

The Mattress is warranted free of defects in material and workmanship each for a period of one (1) year.

The Control Unit, and Mattress are warranted under the terms and conditions of the Gaymar warranty in place at the time of purchase. A copy of the warranty is available upon request. Gaymar disclaims all implied warranties including, but not limited to, the implied warranties of merchantability and of fitness for a particular purpose.

Control Units may be returned to the factory for servicing. Contact Gaymar Customer Service for return authorization prior to return.

Please contact Gaymar Customer Service if you have warranty questions.

Toll Free (800) 828-7341

2.0 Symbols

Attention, consult accompanying documents

Type BF equipment

Dangerous voltage

Protective earth

Latex Free

3.0 Indications for Use

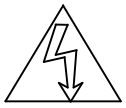
This device is intended to assist in treating and preventing pressure ulcers.

4.0 Contraindications

Air support treatment is not recommended when spinal stability is a concern.

5.0 Safety Precautions

Review the following SAFETY PRECAUTIONS prior to using the P1500 System.



DANGER

- Risk of electric shock. Refer servicing to qualified service personnel.

--EXPLOSION HAZARD--

DO NOT USE IN THE PRESENCE OF FLAMMABLE ANESTHETICS

WARNING

- Disinfect the P1500 system between patient installations. Failure to disinfect may risk cross-contamination and infection.
- Check patient at least every 8 hours or once per shift, to assure proper system operation.
- Deflate mattress before performing CPR or CPR will be ineffective.

CAUTION

- Some medical conditions may not respond to treatment of this type. Patient's skin condition should be inspected regularly. Consult physician if any redness or skin breakdown occurs.
- For grounding reliability, plug only into a properly grounded outlet.
- Make certain all mattress straps are secured to the bed frame to prevent mattress from sliding and causing patient injury.
- Plexus mattresses are not intended to be AND DO NOT FUNCTION AS a patient fall safety device. SIDE RAILS MUST BE USED WITH THE PLEXUS MATTRESS TO PREVENT FALLS, unless determined unnecessary based on the facility protocol or the patient's medical needs as determined by the facility, IN WHICH CASE THE USE OF OTHER SUITABLE PATIENT SAFETY MEASURES ARE RECOMMENDED.
- Use minimal layers of sheeting and incontinence pads. Too many layers between the patient's skin and the support surface will reduce the effectiveness of the system.
- Do not pull linens tightly over mattress. Tight sheets can cause "hammocking" and reduce effectiveness of treatment.
- Do not block the pump intake on the enclosure. Any obstruction to airflow, particularly a dirty filter, will cause excessive heat and greatly shorten the life of the blower. Keep unit away from radiators or other heat sources.
- Do not use in the presence of smoking materials or open flame. Air flowing through the air mattress will support combustion.
- Portable and RF communications equipment can affect medical electrical equipment.

6.0 Description

The P1500 is a portable low air loss mattress replacement designed to economically provide therapeutic benefit to patients suffering from, or at risk of, developing pressure ulcers. The system, consisting of a Control Unit, an Air Flotation Mattress and a Top Sheet, is designed to provide pressure management therapy and patient comfort.

The mattress base consists of sixteen transverse air cushions. Each is over six inches tall (inflated height) and oriented above a two inch convoluted foam base. The material used in their construction is a low shear nylon which aids in the reduction of shear forces. The air cushions are designed with orifices to provide continuous low air loss to aid in the prevention of skin maceration.

Covering the entire mattress assembly is a (low shear producing) 70 Denier nylon top sheet. The top layer of the top sheet is coated with a vapor permeable polyurethane film. This coating creates a monolithic, osmotic membrane impermeable to liquids, air, and bacteria though still permeable to water vapor.

The bottom layer of the top sheet is a quilted spun bonded polyester fiberfill which exhibits less frictional resistance to nylon than that of the patient's skin. The significance of this is that when the patient moves, the top sheet tends to move relative to the air cushions rather than relative to the patient. A secondary feature of this quilting is that it acts to provide a diffusion layer by which water vapor can be drawn away from the patient. Concentrations of moisture will diffuse throughout the top sheet thus resulting in efficient evaporation and subsequent reduced skin maceration.

7.0 Features

7.1 P1500

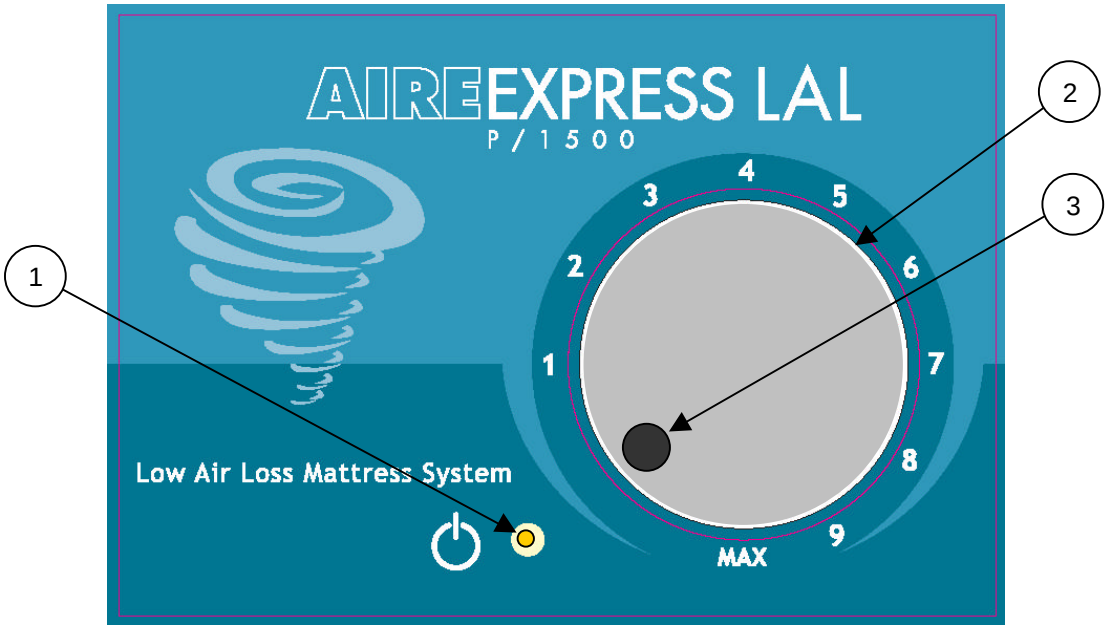
CONTROL UNIT FEATURES

- Compact, light weight, and easy to use
- Durable plastic housing with bedside bracket for easy placement on the foot board of bed.
- Push button connector for quick disconnection and rapid deflation as needed for CPR.
- Dialed Soft/Firm Comfort Control.

P1500
LOW AIR LOSS MATTRESS FEATURES

- Horizontal, tubular cell construction.
- Individual air cushions designed for maximum support area and pressure distribution.
- Dimensions 80″ x 35″ x 8″ when fully inflated.

8.0 Operator Control Panel



1. **Power Indicator** – An amber light indicates AC power is present to the controller, the controller is in standby. A green light indicates system is on, and running.
2. **Comfort Control Dial** – This dial is used to adjust the patient comfort setting. In the position shown in the figure above, the control unit is in standby.
3. **Comfort Setting Indicator** – Indicator will be near current set point.

9.0 Setting Up the System

1. Remove standard mattress from bed frame (1). (Refer to diagram of mattress and bed)
2. Replace standard mattress with the P1500 mattress (2). Make sure to orient mattress so the air tubing (3) exits the mattress at the foot of the bed.
3. Loop each of the four black nylon straps (4) to the bed frame and secure with the D-Rings provided.
4. Suspend control unit from the footboard using the two hooks located on the back of the unit as shown (5). If no footboard exists, place unit on a flat surface near the foot end of the bed. (Be careful not to position the unit on the floor in such a manner that it may become a hazard to foot traffic.)
5. Connect the free end of the tubing (3) to the respective mating connector located on the side of the pump (6). This “quick connect” fitting can be secured by simply mating the two ends together in a linear but opposing direction.
6. Check that the hose is secure by gently pulling. Ensure the air hose is not kinked or tucked under the mattress.
7. Cover P1500 air mattress with the PLEXUS top sheet and attach to the mattress D-rings provided.
8. Plug power cord into a properly grounded outlet. Unit will enter “STAND BY” mode when dial is set to 0. Settings greater than 1 will automatically initiate the units operation.
9. Place patient on the air mattress. (Note: The control unit can inflate the mattress with the patient laying on it.) To assist in patient ingress/egress as well as normal nursing procedure, the air mattress can be maximally inflated by fully rotating the comfort adjust dial in a clockwise direction. **NOTE: To reduce the risk of skin break down, MAX Inflate should not be maintained for greater than 30 minutes.**

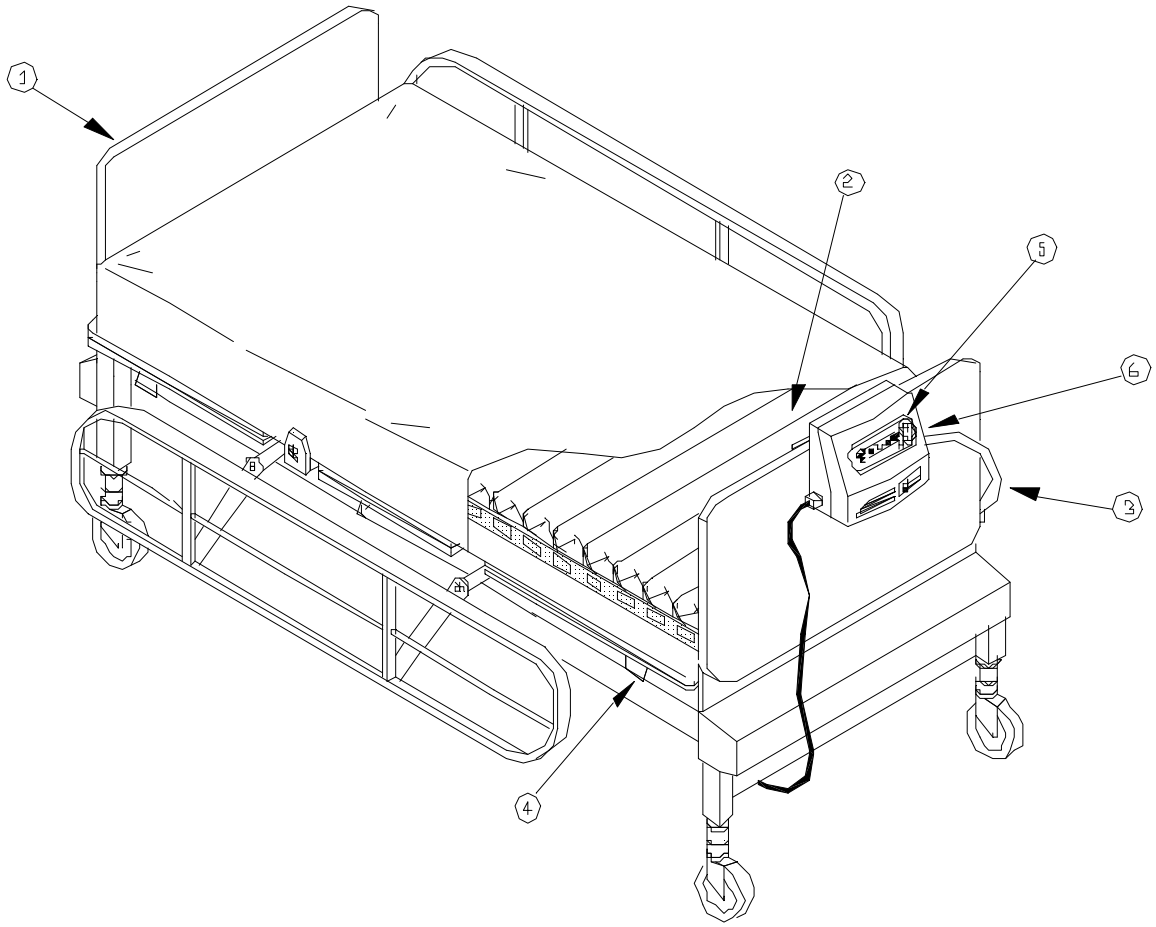
10.0 Instructions for Use

WARNING
Check patient at least every 8 hours or once per shift, to assure proper system inflation.

10.1 Use With M1500 Mattress

1. For proper inflation and patient comfort, adjust pressure by rotating dial initially to MAX. After maximum inflation has been attained, sequentially reduce the pressure setting (i.e. 9..8..7..etc.) until four fingers (stacked vertically) clearance exists between the underlying foam and the patients pelvic region.
2. For mattress deflation when **CPR** is needed, disconnect the hose connector from the controller. Mattress will be fully deflated in less than 15 seconds.

P1500 Diagram



11.0 Transferring Patients In and Out of Bed

1. For patient transfer, turn dial to the MAX INFLATE position. This will maximally inflate the mattress to provide a firm and stable support surface. Upon completion of procedure, return the control unit to the appropriate patient comfort setting.

12.0 CPR (Cardio Pulmonary Resuscitation)

To deflate mattress for CPR:

1. Disconnect the quick-connect coupling of the mattress hose from the Control Unit. Mattress will deflate in 15 seconds.
2. Proceed with CPR procedures.

13.0 System Cleaning, Care and Storage

13.1 Cleaning

WARNING
Disconnect the AC power cord from the wall outlet before attempting to clean the Control Unit. Do not heat or steam autoclave any component of the system.

1. To clean, use soap, water and a clean cloth to wipe down the Control Unit, power cord, hoses and mattress. Do not use abrasive cleaners on the mattress. Wipe dry with a clean, dry cloth. Note: Blood and other body fluids must be thoroughly cleaned from all surfaces before applying disinfectants.
2. Apply any EPA approved disinfectant to the external surfaces of the Control Unit, hoses and mattress. Allow contact time according to manufacturers instructions. The solution contact time is what makes disinfection effective.
3. Wipe down the mattress with a clean, dry cloth to remove any excess disinfectant.
4. Top sheets of mattress may also be laundered between patient uses or as required to maintain good patient hygiene. Fill the washing machine with warm water (70 -140 °F or 21 - 60 °C). Add one cup of laundry detergent. Place no more than four top sheets in a single extra large load capacity washing machine. When wash cycle is complete, remove promptly from machine and ensure all excess water is drained from load. Place dryer on LOWEST heat setting, or AIR FLUFF if available until dry. Verify top sheet is completely dry before placing under patient.
5. If individual air cells of mattress become soiled, clean and disinfect as described above or simply replace air cell with a clean replacement. Single air cell replacement can be successfully achieved with patient remaining on the mattress.

13.2 Storage

Control Unit

1. Check the AC power cord and plug for abrasions or excessive wear.
2. Coil power cord up and place both cord and Control Unit in plastic bag for storage.

Mattress

1. Check the air manifold of the mattress for kinks or breaks. Replace if necessary.
2. To deflate, disconnect hose assembly from Control Unit.
3. Coil the hose assembly loosely and roll the deflated air mattress starting at the head end. Use the straps for containment. Place in plastic bag for storage.

14.0 Troubleshooting

Symptom:	Corrective Action
Mattress does not inflate or is too soft.	Make certain the air hose is not kinked, cracked, or split. Verify the power switch is illuminated, signifying the control unit has power. Verify the hose quick connect is fully inserted. Verify that all 16 air cushions are connected to the air manifold. Inspect and/or clean intake air filter on the control unit.
Loss of power.	Make certain the power receptacle has power, and the light on the front panel is illuminated and the patient comfort setting is 1 or greater.

MAINTENANCE

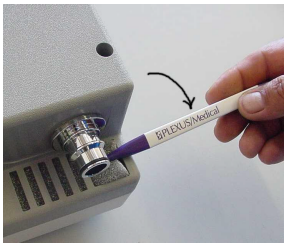
There is only one operator maintenance item for the P1500 system. The air filter must be cleaned every 30 days. Remove the filter (see filter removal instructions), located near the mattress hose connector. Wash the filter with soap and water and rinse thoroughly. Allow the filter to dry completely and reinstall. Filters that are brittle or crumble should be replaced. Replacement filters can be ordered under P/N 20228.

WARNING
Failure to clean the filter can result in damage to the control unit and/or inadequate patient support.

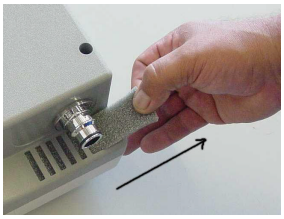
Periodic testing for function and/or repairs should be referred to qualified personnel in accordance with P1500 service manual. Factory repairs can be arranged through your local Plexus dealer or by contacting Gaymar customer service at 1 800 828 7341.

15.0 Filter Instructions:

15.1 Filter Removal Instructions:

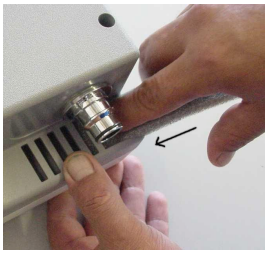


Step 1: Using a finger or other suitable tool, such as a pen, pry up the end of the filter through the large vent opening.

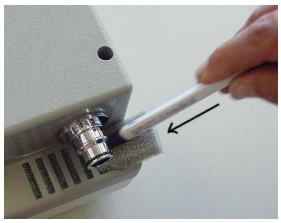


Step 2: Next, grasp the filter between the thumb and index finger and pull slowly from the housing.

15.2 Filter Installation Instructions:



Step 1: Insert the first inch of the filter into the large vent opening in the rear housing



Step 2: Next, using a series of short strokes with a pen or similar tool, move the filter completely up into the rear enclosure.

16.0 Specifications, Control Unit

C1500	
Enclosure Dimensions	10" x 12" x 4-1/2" (25 cm x 30 cm x 11 cm)
Weight	9.5 pounds (4.3 kg)
Power Cord	Detachable 14' , #18 AWG minimum, with ground wire
Overcurrent Protection	Primary Two 32mm x 6.3mm fuses 5A, 250V, T, L
	Secondary One 32mm x 6.3mm fuses .15A, 250V,T, L
Input	120 VAC, 60Hz, 5A
Operating Ambient Temperature Range	60 to 80°F (16 to 26°C)
Classification	Class I grounded equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
	Type BF equipment
	UL 544, CSA C22.2 NO. 125
	IPXO, enclosed equipment without protection against ingress of water.
	Continuous operation
Electromagnetic Compatibility	(CISPR 11 Classified as Class B, Group 1 ISM equipment)

GAYMAR®

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